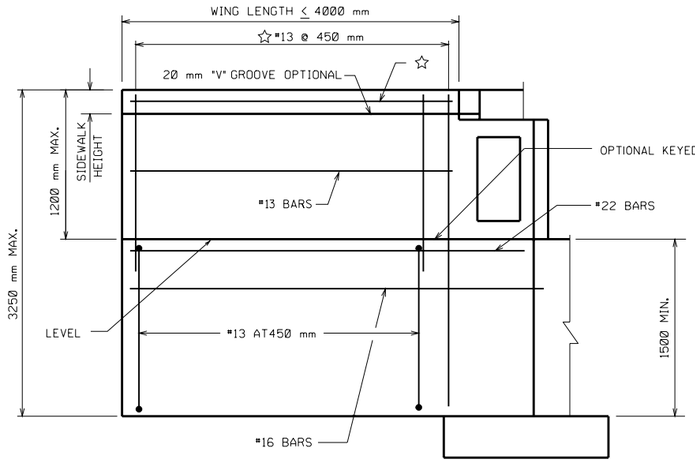
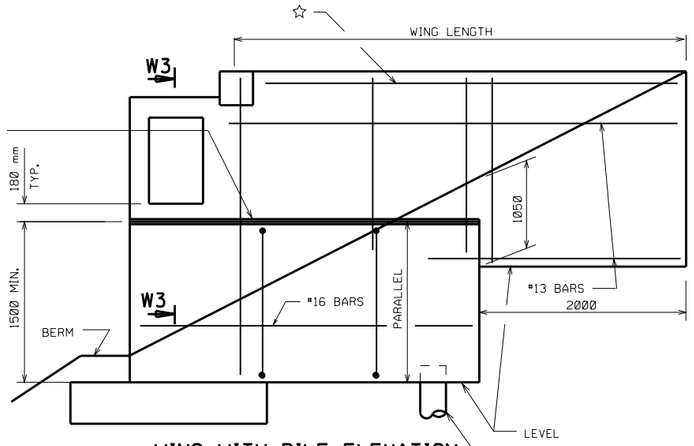


WING WITHOUT PILE ELEVATION

(FRONT FACE)



WING WITH PILE ELEVATION

(FRONT FACE)

WING PILE REQ'D. FOR WING LENGTH OVER 4000 mm. HEIGHT GREATER THAN 3250 mm H_U OVER 1200 mm.

DESIGNER NOTES

LENGTH OF A3 BARS SHALL BE ≥ TO WING LENGTH.

WING WITH PILE & WING WITHOUT PILE CAN BE USED FOR EITHER SIDEWALK OR SLOPED FACE PARAPETS. THE TYPE OF WING TO USE IS BASED ONLY ON THE WING HEIGHT AND WING LENGTH LIMITATIONS SHOWN.

LAP LENGTH FOR HORIZONTAL BARS SHALL BE BASED ON A "CLASS C" TOP TENSION LAP SPLICE.

FRONT ROW PILES ARE DESIGNED FOR AN EQUIVALENT FLUID PRESSURE OF 1900 Pa AND SUPERSTRUCTURE REACTIONS "P". BACK ROW PILE DESIGN IS BASED ON AN EQUIVALENT FLUID PRESSURE OF 950 Pa AND "P".

☆ IF "F", "W", OR "M" STEEL RAILING IS ATTACHED TO TOP OF WINGS INSTEAD OF PARAPETS AS SHOWN. SEE DETAIL A.

WHEN TYPE "F", "W", OR "M" RAILING IS USED, LOCATE NAME PLATE ON FIRST RIGHT WING TRAVELING UP STATION.

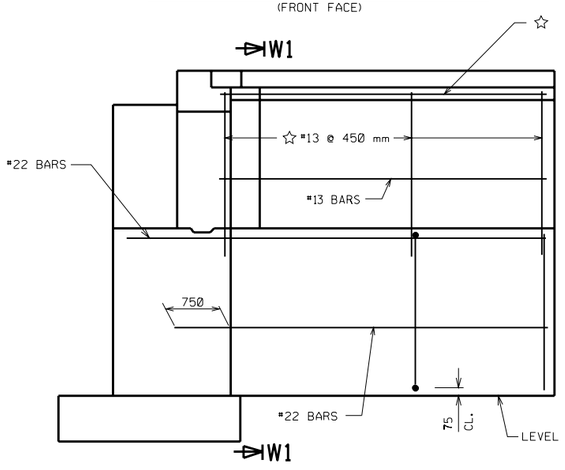
ALL WING BARS SHALL BE EPOXY COATED.

ALL DIMENSIONS ARE IN MILLIMETERS

FOR MODULAR EXPANSION JOINTS W/CONC. DIAPH. RUNNING TO EDGE OF DECK: IF SIDEWALL IS USED, FORM SIDEWALL 50 mm BELOW CONC. DIAPH.

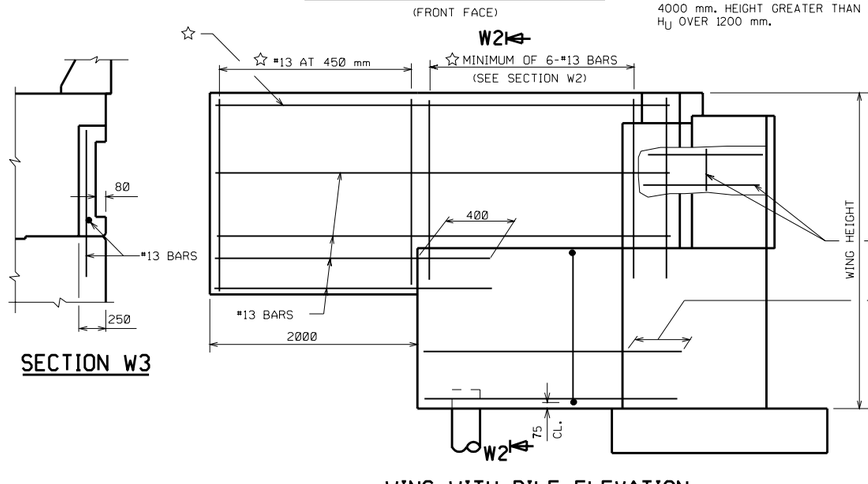
DESIGN LOADS

HORIZONTAL EARTH LOAD = 1600 Pa
EQUIV. FLUID PRESSURE.
LIVELOAD = 600 mm SURCHARGE
LOAD FACTOR (WINGS) = 1.3 (5/3 LL + 5/3 E)
LOAD FACTOR (BODY) = 1.3 (5/3 LL+ 1.3 E)
f_y = 420 MPa
f'_c = 24 MPa



WING WITHOUT PILE ELEVATION

(BACK FACE)



→	LENGTH
#16	450
#19	550
#22	750
#25	950
#29	1150
#32	1350

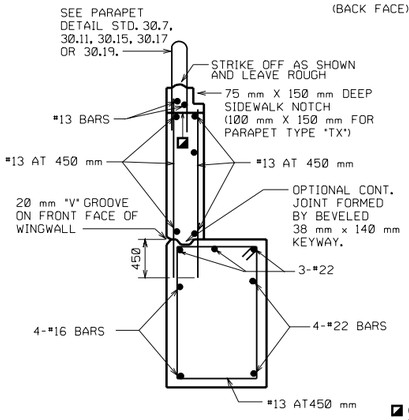
WING WITH PILE ELEVATION

(BACK FACE)

TABLE A

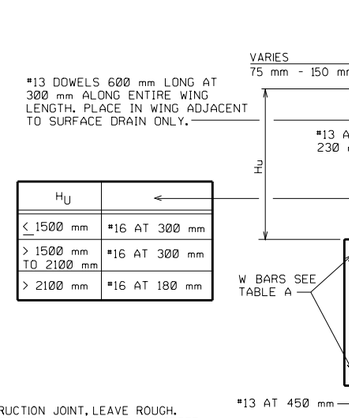
WING 2 LENGTH	WING 2 HEIGHT 3000	3500	4000	4500	BARS
4000		5-#16	——	——	W
		6-#16	——	——	A3
5000	5-#19	6-#19	5-#22	——	W
	6-#19	4-#25	6-#22	——	A3
6000	6-#22	5-#25	6-#25	7-#25	W
	4-#29	5-#29	6-#29	7-#29	A3
7000	7-#25	7-#29	6-#32	7-#32	W
	6-#29	7-#29	7-#32	8-#32	A3
8000	6-#32	7-#32	6-#32 †	7-#32 †	W
	6-#32	8-#32	8-#32 ††	9-#32 ††	A3

† USE 1400 mm FOR LOWER WING POUR WIDTH
†† USE 1000 mm MIN. FOR BEARING SEAT WIDTH



SECTION W1

CONC. PARAPET AND SIDEWALK



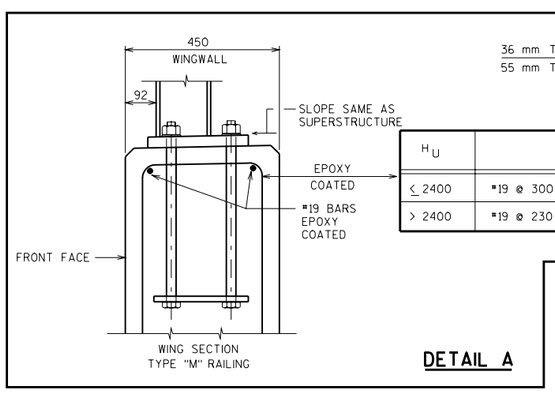
SECTION W3

H_U	
≤ 1500 mm	#16 AT 300 mm
> 1500 mm TO 2100 mm	#16 AT 300 mm
> 2100 mm	#16 AT 180 mm

SECTION W2

TYPE "LF" OR "HF" PARAPET

◪ CONSTRUCTION JOINT, LEAVE ROUGH. REQUIRED FOR PRESTRESSED CONCRETE SUPERSTRUCTURES. OPTIONAL FOR OTHERS. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.



H_U	
≤ 2400	#19 @ 300
> 2400	#19 @ 230

DETAIL A

ABUTMENT TYPE A3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DEVELOPMENT SECTION

APPROVED: _____ DATE: 6-02

METRIC STANDARD 12.4